

**MGM 1280.1**

**REVISION A**

**EFFECTIVE DATE: February 7, 2006**

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# **MARSHALL GUIDANCE MANUAL**

**DA01**

## **GUIDANCE FOR CONTINUAL IMPROVEMENT**

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## DOCUMENT HISTORY LOG

Status (Baseline/ Revision/ Canceled)	Document Revision	Effective Date	Description
Baseline		9/27/2005	This guidance document replaces MPR 1280.9, "Continual Improvement."
Revision	A	2/7/2006	Deleted references to MPR 1000.1, MPR 1130.1, MPR 1130.2 and Implementation Plans due to changes in these processes at the Agency level. Deleted NPR 7120.5 – not used in text. Replaced MWI 8040.6 with MPR 8040.1. Updated the title of MSFC Form 426. Deleted MSFC-HDBK-3173. Updated web addresses.

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## 1. PURPOSE

This Marshall Guidance Manual (MGM) provides guidance for continual improvement activities at the Marshall Space Flight Center (MSFC).

## 2. REFERENCES

- 2.1 MPD 1000.1, “MSFC Governance”
- 2.2 MPD 1150.1, Charter MC–08, “MSFC Program Management Council”
- 2.3 MPD 1150.1, Charter MC–21, “MSFC Integrated Management System Board (IMSB)”
- 2.4 MPD 1150.1, Charter MC–25, “MSFC Strategic Planning Council”
- 2.5 MPD 1280.1, “Marshall Management Manual”
- 2.6 MPR 1280.1, “Management Review”
- 2.7 MPR 1280.4, “MSFC Corrective Action System”
- 2.8 MPR 1280.6, “Internal Quality Audits”
- 2.9 MPR 1280.8, “Customer Satisfaction”
- 2.10 MPR 1410.2, “Marshall Management Directives System”
- 2.11 MPR 5000.1, “Purchasing”
- 2.12 MPR 7120.1, “Program/Project Planning”
- 2.13 MPR 8040.1, “Configuration Management, Programs/Projects”
- 2.14 MPR 8730.3, “Control of Nonconforming Product”
- 2.15 MPR 8730.4, “Statistical Techniques”
- 2.16 MWI 1280.2, “MSFC Customer Feedback System”
- 2.17 MWI 1280.3, “Corrective/Preventive Action Notification System”
- 2.18 MWI 1280.5, “MSFC ALERT Processing”
- 2.19 MWI 5100.1, “Initiating Procurement Requisitions”

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2.20 MWI 5116.1, “Evaluation of Contractor Performance under Contracts with Award Fee Provisions”

2.21 MWI 5330.1, “Evaluation/Audits of Contractors, Suppliers, and Vendors”

2.22 MWI 5330.2, “NASA Engineering and Quality Audit (NEQA)”

2.23 MWI 8050.1, “Verification of Hardware, Software, and Ground Support Equipment for MSFC Projects”

2.24 MWI 8715.13, “Safety Concerns Reporting System (SCRS)”

2.25 MSFC Form 426, “Here’s My Idea” Suggestion Form

2.26 MSFC–HDBK–3173, “MSFC Project Management and Systems Engineering Handbook”

### 3. DEFINITIONS

3.1 Continual Improvement. Recurring activity consistent with Center values to increase the ability to fulfill requirements, increase the effectiveness of the management system and its processes, improve safety, and make other improvements that enhance quality, productivity, and the Center’s quality of life.

3.2 Marshall Management System (MMS). A system that is made up from the set of directives and requirements that delineate how we do business at Marshall.

3.3 Metric. A standard of measurement.

3.4 Objective. An aim or goal toward which effort is directed. A strategic position to be attained or a purpose to be achieved by an organization.

3.5 Quality Objective. Something sought, or aimed for, related to quality. Quality objectives are generally based on the MSFC quality policy and should be measurable.

### 4. GUIDANCE

#### 4.1 Standard MSFC Processes for Improvement.

Improvements are made on a routine basis through the use of the quality policy, quality objectives, audit results, analysis of data, corrective and preventive actions, and management review. (Reference MPD 1280.1, “Marshall Management Manual.”) See Appendix A for a brief summary of these standard MSFC processes for improvement.

#### 4.2 Other Continual Improvement Activities.

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4.2.1 Other continual improvement efforts may take place through breakthrough projects or small-step ongoing improvement activities. Cross-functional teams are usually formed outside of routine operations to work on breakthrough improvement projects, while people or teams within an organization are the best source of ideas for small-step or ongoing process improvement. See Appendix B for a general continual improvement process flow.

4.2.2 There are also several methods for any MSFC employee to submit recommendations for improvements, including those listed below. Actions are assigned to appropriate organizations to evaluate suggestions and either implement improvements or provide an explanation if no changes are necessary.

4.2.2.1 Formal Suggestion Program. A Centerwide, formal process for suggestions that would benefit MSFC, NASA, and other Government agencies in achieving measurable improvements in organization efficiency, service, and cost reduction. (Reference MSFC Form 426, “Here’s My Idea.”) (Access: <http://inside.msfc.nasa.gov/index.html/howto/suggestion.html>)

4.2.2.2 Innovative Dynamic Employee’s Active Solutions (IDEAS). Suggestions that would improve the safety or quality of life at Marshall, Centerwide, or within a particular organization. This system can be accessed under Employee Resources on Inside Marshall. (Access: <http://ideas.msfc.nasa.gov/>)

4.2.2.3 Safety Concerns and Reporting System (SCRS). Ideas for improving MSFC’s safety, health, and environmental programs. This system can be accessed through Inside Marshall or the SHE web page. (Reference MWI 8715.13, “Safety Concerns Reporting System (SCRS).”) (Access: [https://msfcsma3.msfc.nasa.gov/dbwebs/apps/safetrak/nonrestrict/concerns\\_new\\_input.aspx](https://msfcsma3.msfc.nasa.gov/dbwebs/apps/safetrak/nonrestrict/concerns_new_input.aspx))

4.2.2.4 Lessons Learned/Best Practices/Application Notes Standards Integration System. A web-based tool for accumulating and sharing data related to lessons learned working with technical standards. (Access: <http://standards.nasa.gov/>)

## 5. CANCELLATION

MGM 1280.1, dated September 27, 2005.

*Original signed by  
Robin N. Henderson for*

David A. King  
Director

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## APPENDIX A

### STANDARD MSFC PROCESSES USED FOR CONTINUAL IMPROVEMENT

#### A.1 MSFC Quality Policy and Objectives

MSFC policy is to provide quality products and services to our customers. (Reference Marshall Policy Directive (MPD) 1280.1, “Marshall Management Manual,” for the full statement of the quality policy.) MSFC establishes quality objectives to support this policy. Directorate/Office-level objectives, including quality objectives, are established during strategic planning and tracked in the Center’s scorecard. (Reference MC-25, “MSFC Strategic Planning Council.”)

Objectives, including quality objectives, for programs/projects are established and tracked by the programs/projects. (Reference MPR 7120.1, “Program/Project Planning.”) Program/project plans and/or quality plans establish objectives, including quality objectives, for products.

Results are reviewed during project reviews by the Program/Project Management Council (PMC) or appropriate approval board. (Reference MPR 7120.1, “Program/Project Planning,” MC-08, “MSFC Program Management Council,” MC-21, “MSFC Integrated Management System Board (IMSB),” and MC-25, “MSFC Strategic Planning Council.”)

#### A.2 Audit Results

Internal audits are used to evaluate compliance of processes with the Marshall Management System (MMS) and other specific program/project or customer requirements. Results of audits are documented in audit reports with corrective/preventive actions initiated and tracked using nonconformance reports. (Reference MPR 1280.6, “Internal Quality Audits.”)

In addition to the internal audit program, MSFC is periodically audited by external entities such as the NASA Inspector General (IG), the General Accounting Office (GAO), and a Quality System Registrar. Corrective/preventive actions are taken, as necessary, in response to these external audits.

#### A.3 Analysis of Data

Continual improvements are also achieved through analysis of data collected as part of the following ongoing processes:

A.3.1 Data on customer satisfaction is provided through MPR 1280.8, “Customer Satisfaction,” and Marshall Work Instruction (MWI) 1280.2, “MSFC Customer Feedback System.”

Corrective/preventive action in relation to significant external customer complaints or any failure to provide quality products and services to an external customer are initiated and tracked through the MSFC Corrective Action System. Less significant issues or issues from internal customers are resolved by the affected Directorate/Office outside the formal MSFC Corrective Action System. (Reference MPR 1280.4, “MSFC Corrective Action System.”)

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A.3.2 The process for nonconforming product is MPR 8730.3, “Control of Nonconforming Product.” Data relating to nonconforming product is analyzed and corrective/preventive action is initiated when necessary in accordance with MPR 1280.4, “MSFC Corrective Action System.”

A.3.3 Data on conformance of product to design requirements is reviewed by each project prior to shipment of product from MSFC. Any rework, repair, and redesign is documented and reverified prior to completion of the certification/verification activity. (Reference Acceptance Reviews and Integrated Readiness Reviews (IRRs) in MSFC–HDBK–3173, “MSFC Project Management and Systems Engineering Handbook,” MPR 8040.1, “Configuration Management, MSFC Programs/Projects,” and MWI 8050.1, “Verification of Hardware, Software, and Ground Support Equipment for MSFC Projects.”)

A.3.4 Each MSFC Directorate/Office defines, plans, and implements the measurement and monitoring activities needed to determine, collect, and analyze appropriate data to demonstrate the suitability of its processes and to be able to evaluate where continual improvement of the processes can be made. (Reference MPR 8730.4, “Statistical Techniques.”)

A.3.5 MSFC Directorates/Offices review and evaluate directives and organizational instructions for continuing adequacy and accuracy on an annual basis, at a minimum. Revisions include corrections and improvements. (Reference MPR 1410.2, “Marshall Management Directives System.”)

A.3.6 Supplier performance is monitored by the Contracting Officer (CO), Contract Specialist, Contracting Officer’s Technical Representative (COTR), Award Fee Coordinators, Monitors, and Safety and Mission Assurance (S&MA). Corrective action is taken as appropriate. (Reference MPR 5000.1, “Purchasing,” MWI 5100.1, “Initiating Procurement Requisitions,” MWI 5116.1, “Evaluation of Contractor Performance under Contracts with Award Fee Provisions,” MWI 5330.1, “Evaluation/Audits of Contractors, Suppliers, and Vendors,” and MWI 5330.2, “NASA Engineering and Quality Audit (NEQA).”)

A.3.7 Supplier continual improvement is also encouraged through the George M. Low Award process and the MSFC Contractor Excellence Award. The NASA George M. Low Award is NASA’s premier quality and productivity award for the aerospace industry. This annual award program recognizes NASA large and small businesses that demonstrate an exceptional level of quality and technical performance in NASA-related contracts or subcontracts. The MSFC Contractor Excellence Award is based on the same criteria, but awards are given at the Center level. These winners go forward to compete for the George M. Low Award.

#### A.4 Corrective and Preventive Actions

Corrective and preventive actions, by their nature, provide for improvements to the MMS and to our end products/services. (Refer to MPR 1280.4, “MSFC Corrective Action System,” MWI 1280.5, “MSFC ALERT Processing,” and MWI 1280.3, “Corrective/Preventive Action Notification System.”)

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#### A.5 Management Review

The management review process is also to be used to effect continual improvement. The Center Governance process ensures review of the MMS for its continuing suitability, adequacy, and effectiveness, and assesses opportunities for improvement. Action items are assigned as necessary and statused at subsequent meetings. (Reference MPR 1280.1, “Management Review,” and MPD 1000.1, “MSFC Governance.”)

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## APPENDIX B

### GENERAL CONTINUAL IMPROVEMENT PROCESS

B.1 Continual improvement efforts generally involve the following steps:

B.1.1 Identify an area for improvement such as an opportunity, innovation, or a process problem. The quality policy, objectives, available resources, and potential benefit from the improvement should be taken into consideration in determining appropriate areas to work.

B.1.2 Evaluate/analyze the existing process. Collect data to evaluate the efficiency and effectiveness of the process and to identify any recurring/significant problems. This data may be gathered from process monitoring or the corrective action system.

B.1.3 Select a specific area for improvement and set an objective for improvement.

B.1.4 Identify the underlying need for improvement or root cause of the problem, if any.

B.1.5 Explore alternative implementation strategies, solutions for the problem (if any), or plan the improvement to the process. Make recommendations to the appropriate approval authority/process owner.

B.1.6 Implement the approved improvements.

B.1.7 Evaluate the effects of the improvement. The selected problems, if any, should be eliminated or their effects decreased.

B.1.8 Modify the improvement as required.

B.1.9 Document any lessons learned as a result of continual improvement activities, as appropriate.

B.2 General Continual Improvement Process Flow. (See next page.)

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## GENERAL CONTINUAL IMPROVEMENT PROCESS FLOW

